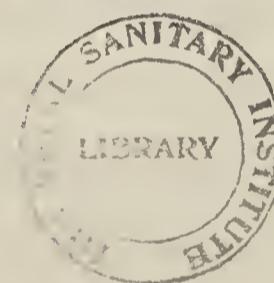


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# CITY OF MELBOURNE



## REPORT OF HEALTH COMMITTEE

FOR THE

YEAR ENDED 31st DECEMBER, 1941

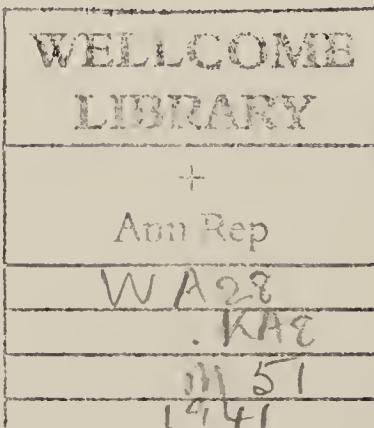
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# CITY OF MELBOURNE



## REPORT OF THE HEALTH COMMITTEE FOR THE YEAR 1941

### MEMBERS OF COMMITTEE.

Councillor Townsend (Chairman).  
Councillor Brens.  
Councillor Carter.  
Councillor Foster (retired 28/8/41).  
Councillor E. L. Morton.  
Councillor Sir Harold Gengoult Smith.  
Councillor Williams (appointed 15/9/41).

The Health Committee submits, for the information of the Council, a report regarding the work carried out under the direction of the Committee during the year ended 31st December, 1941.

### REPORTS OF OFFICERS.

A report by the Medical Officer of Health (Dr. John Dale) upon the work of the Health Department during 1941, and upon the health of the inhabitants of the City generally, is attached hereto, together with reports by Dr. Hilda E. Kincaid upon child welfare work, by Dr. Hilda Bull upon infectious diseases, by Mr. J. W. Byrne and Miss Beatrice Woodcock upon the work of the dental clinics, by Mr. T. G. O. Jordan, the Chief Health Inspector, on the routine work of the Department, by Messrs. Dunn, Son and Stone, City Analysts, and by Professor Harold A. Woodruff, Director of the Bacteriological Laboratory, University of Melbourne. Full details of the various health activities of the Council are contained in these reports.

### STATISTICS.

Statistics for the year show that notable variations from the previous year are that the infant mortality rate, 36.8 per 1000 births, is very satisfactory, indeed being nearly as low as the record of 36.2 in 1939, and that the birth rate of 14.19 shows a further increase as compared with 13.9 per 1000 for 1940, and corresponds to similar rises recorded for Greater Melbourne and for the State as a whole. The death rate, 12.92, is a little lower than that of the previous year, 13.34.

### CHILD WELFARE.

The work of the Child Welfare Branch maintained its satisfactory progress, and the volume of work carried out was of about the same magnitude as in recent years.

The Committee continued its assistance to parents in indigent circumstances by the supply of milk and certain special foodstuffs such as cod liver oil, etc., the total expenditure being £2280/16/5, of which the amount of £337/5/4 was refunded by parents. It is interesting to note that the number of families needing assistance in the supply of milk and foodstuffs shows a substantial reduction of approximately 25 per cent. owing to the improved economic conditions.

In the latter part of her report dealing with pre-school children, Dr. Kincaid refers to the need for the provision of facilities for ensuring cleanliness both of persons and of clothing for a large part of the City's residential areas, and suggests that more public baths and communal laundries should be provided. It is difficult for people to maintain a reasonable standard of cleanliness in the absence of proper facilities. When the re-building of the slum areas is undertaken, this matter should be borne in mind.

It is rather disappointing that a larger proportion of parents do not take advantage of the unique facilities offered at the dental clinics established by the Council at the Kensington and Newry Street (Carlton) Centres by bringing their children (2-6 years) regularly to the dentists employed by the Council. With a view to effecting an improvement in the attendances, direction signs have been erected in these localities bringing the dental clinics under the notice of residents.

The total amount expended by the Council on the maintenance work of the child welfare centres in the City of Melbourne during 1941 was £3719/1/8, of which £337/10/- was contributed by the State Government.

It is interesting to note that since 1927 the Council has spent over £63,000 on the construction, equipment and maintenance of child welfare centres, kindergartens and creches.

## INFECTIOUS DISEASES.

The accompanying reports show the amount of preventive work against the common infectious diseases.

The outstanding features of the year were a sharp outbreak of diphtheria of a severe type with a higher fatality than usual, the prevalence of cerebro-spinal meningitis, and the maintenance of the prevalence of scarlet fever. Measles seemed, for the second year in succession after the epidemic of 1939, to be completely absent, and whooping cough was almost absent.

The figures for tuberculosis in the City, though not very reliable, indicate rather an improvement in the situation. This may be associated with improved economic conditions; but, as a general rule, the effect of war is to cause a deterioration in the position.

## **INFECTIOUS DISEASES HOSPITAL—FAIRFIELD.**

The Council's contribution towards the Queen's Memorial Infectious Diseases Hospital amounted to £11.105/7/4.

The contributions for the past five years were:—

1937	...	£9,801	10	2
1938	...	10,912	13	3
1939	...	10,344	12	8
1940	...	11,588	14	6
1941	...	11,105	7	4

## **HEATHERTON SANATORIUM.**

The Council's contribution towards the Heatherton Sanatorium was £1260/1/6.

The contributions for the past five years were:—

1937	1298	14	0
1938	1289	7	8
1939	1288	11	8
1940	1266	9	8
1941	1260	1	6

## **FOOD SUPPLIES.**

Reports upon the examination of milk indicate that the chemical quality of milk samples is again very good, and that of 281 samples submitted for chemical examination, 273, or 97.2 per cent. of the total, complied with the standard. The average figure of 13.27 for total solids was again very high, and the average percentage of fats, 4.24, is slightly lower than that for the previous year, which was the highest yet recorded.

Details of chemical and bacteriological examination of milk samples are set out in the reports of the Medical Officer of Health and the Chief Health Inspector attached hereto.

HOUSING.

The accompanying report of the Chief Health Inspector gives a detailed account of the very extensive housing work which was carried out by the Health Department acting as agents for the Housing Commission. It was, unfortunately, necessary, owing to the increasing gravity of the war situation, to suspend the policy of demolition of insanitary houses and the erection of new houses, and to adopt the policy of preserving, as far as possible, the existing accommodation.

The Committee has been in close co-operation with the Housing Commission in helping to improve housing conditions in the City of Melbourne so far as is practicable under existing war conditions.

Throughout the year 330 notices were served by the Council in respect of which 164 houses were demolished, 71 were repaired, 24 were vacated awaiting demolition, and, at the close of the year, the work at 71 premises was in various stages of progress.

W. C. L. TOWNSEND, LL.M.,  
Chairman.

12th June, 1942.

H. S. WOOTTON, Town Clerk.

# Report of the Medical Officer of Health for the Year 1941.

Health Department,  
Town Hall Chambers, Melbourne,  
1st June, 1942.

The Chairman and Members, Health Committee.  
Gentlemen,

I have the honour to present my report for the year 1941.

The health of the community, as far as may be judged from available statistics and from contacts made in carrying out our various services, continues to be reasonably satisfactory. Plentiful work at relatively high wages, child endowment and military allotments have raised average incomes, whilst supplies of essential goods have been, in the main, available and prices have been effectively controlled. Hence it is probable that many members of the community have been better off, that is to say, better able to satisfy their needs, than ever before. Poverty is definitely the chief cause of ill-health, and that the increasing gravity of the war situation should be responsible for this unprecedented prosperity is a sardonic comment on our civilization, and provides a lesson which must not be forgotten.

Unfortunately, the encouraging prospects of better housing and of substantially improved conditions for the children, by the rapid development of kindergartens and other child welfare facilities, have had to be, for the time, abandoned, and the maintenance of our present meagre standard of housing and of educational facilities will clearly be a task of great difficulty.

The availability of a satisfactory diet is, however, the first essential of health, and one which we should, fortunately, be able to ensure. Supplies of wheat, milk, dairy products, meat and fruits, especially citrus fruits, should be ample, even in face of the increased demands, whilst the need for an adequate supply of vegetables for the whole population, also a matter of great importance, is apparently appreciated.

Regarding the use of the abundant wheat supplies, the interesting controversy concerning the kind of bread which is best for health has advanced to a stage when most authorities agree that bread made of flour containing at least 85 per cent. of the wheat berry, such as is now being supplied or about to be supplied universally in England, is definitely superior to ordinary white bread, and that, especially if the choice of foodstuffs becomes restricted, it is very important that we should have such bread here. For the adequate nutrition of children and mothers, especially expectant mothers, it is agreed that white flour and sugar should not form any considerable proportion of the diet.

## VITAL STATISTICS.

The principal vital statistics for the last ten years and the average for the five-year period 1927-1931, as supplied by the Government Statist, are given in Table I. below:—

TABLE I.

Year	Estimated Mean Population	No. of Births	Birth Rate	No. of Deaths	Death Rate	Infantile Mortality Rate per 1000 live births
1927-31 (5 year average) .....	97,380	1462	15.01	1133	11.67	67.5
1932 .....	93,780	1036	11.05	1023	10.91	58.0
1933 .....	92,120	1173	12.73	1098	11.92	47.4
1934 .....	92,500	1120	12.43	1139	12.69	50.0
1935 .....	92,710	1119	12.39	1111	12.32	49.2
1936 .....	92,850	1131	12.53	1147	12.70	53.9
1937 .....	92,850	1176	13.03	1104	12.23	41.7
1938 .....	92,900	1156	12.81	1135	12.58	39.8
1939 .....	93,200	1105	12.22	1208	13.36	36.2
1940 .....	93,650	1257	13.86	1210	13.34	54.1
1941 .....	95,400	1303	14.19	1186	12.92	36.8

The birth rate shows a further rise to the figure of 14.19 per 1000, which again corresponds to similar rises recorded for Greater Melbourne and for the State as a whole.

The death rate, 12.92, is a little lower than that of last year, 13.34.

The infant mortality rate for the City of 36.8 is very satisfactory, indeed being nearly as low as the record of 36.2 in 1939.

## CHILD WELFARE.

Details of the child welfare work in the City are given in the report of Dr. Hilda Kincaid. The report shows that the volume of work carried out was of about the same magnitude as in recent years. Owing to the circumstances of the war, it is not possible to record that any further constructive steps have been taken in the field of child welfare. The relatively high infantile mortality of last year was due to an unusually high neonatal mortality, i.e., mortality among infants under one month of age, and that high figure was partly due to a high mortality among the twins born in the City, 10 of the 18 born alive having failed to survive for one month. This year the neonatal mortality returned to its usual figure, as may be seen from the table, and only 3 out of 30 twin children born alive failed to survive.

The mortality between one month and one year was again very low. Reference to the table shows that this figure has been low since 1937, which suggests that it may be related to the improved economic conditions which have prevailed since about that date.

It is interesting to note that the number of families needing assistance in the supply of milk and foodstuffs shows a substantial reduction of approximately 25 per cent. of last year's total.

In the latter part of her report dealing with pre-school children, Dr. Kincaid refers to the need for the provision of facilities for ensuring cleanliness both of persons and of clothing for a large part of our residential areas, and suggests that more public baths and communal laundries should be provided. Dr. Kincaid has often pointed out how difficult it was for people to maintain a reasonable standard of cleanliness in the absence of proper facilities. The matter is certainly one which should be borne in mind when the re-building of the "slum" areas does finally come to be undertaken.

Many of the kindergartens in the City, and a number of schools, were again able to extend their activities in respect of the provision of meals, owing to the widespread movement of "adoption" by the staffs of various firms and organizations. Very substantial assistance in this regard, amounting to approximately £200 during the year, has been given by the officers of the City Council, and this is gratefully acknowledged.

## DENTAL SERVICES.

The reports of the dental officers, Mr. J. W. Byrne, at Kensington, and Miss Beatrice Woodcock, at Newry Street, show that a large amount of good work has been carried out.

It is rather disappointing, however, that a larger proportion of parents in the districts served do not take advantage of the unique facilities offered by bringing their children regularly to the dentist during the age period of 2-6 years. If children of these ages "seem alright," it is hard to persuade parents of the value of regular expert examination, both medical and dental. This persuasion is easy when kindergarten facilities are also provided. In the meantime, more educational propaganda will be attempted.

## INFECTIOUS DISEASES.

Details of the events and of work under this heading are given in the accompanying report by Dr. Hilda Bull.

The outstanding features of the year were a sharp outbreak of diphtheria of a severe type with a higher fatality than usual, a prevalence of cerebro-spinal meningitis, and the maintenance of the prevalence of scarlet fever. Measles seemed, for the second year in succession after the epidemic of 1939, to be completely absent, and whooping cough was almost absent.

A rise in diphtheria was reported in the last quarter of 1940, the disease having been at a low ebb for several years, and it was then predicted that the rise would be of several years' duration. This, however, appears not to be the case. During the latter half of 1941, the prevalence of diphtheria diminished, and, at the time of writing, the disease is at a lower ebb than has ever yet been recorded in the City.

One would like to think that this unexpected waning of the diphtheria epidemic is the result of the campaign of immunization against the disease, and, indeed, it is possible that such is the case. In 1941, the number of individuals in the City who received two or more doses of immunising material was 2470, as compared with 1503 in 1940. Since other municipalities throughout the Metropolitan area also carried out more vigorous campaigns during 1941 than had ever before been conducted, it may be that the waning of the epidemic was largely due to these efforts. Needless to say, our freedom from severe diphtheria in the future, and even in the near future, depends upon the steady maintenance of immunization work throughout the whole community.

The occurrence of 14 cases of cerebro-spinal meningitis, the highest number since the last war, marks the appearance in the City of a prevalence which was to be expected in war time, and which has for some time existed in other parts of Australia. A notable feature of the epidemic associated with this war, compared with that of the first World War, is that the incidence among the civilian population is relatively high as compared with that among the military forces. This may be due to improved hygiene among the military forces, especially in relation to accommodation and possibly also to diet. The outstanding difference between the present situation and that of 1914-18 is, however, in the matter of the successful treatment of the disease by the use of the sulphonamide compounds.

The prevalence of scarlet fever was approximately the same as in 1940, and definitely lower than in 1939, which was a peak year. The disease continued to be in a mild form.

The figures for tuberculosis in the City, though not very reliable, indicate rather an improvement in the situation. This may be associated with improved economic conditions; but, as a rule, the effect of war is to cause a deterioration in the position.

## FOOD SUPPLIES.

Details regarding the inspection of food premises and the examination of foodstuffs are included in the attached report by the Chief Health Inspector, Mr. T. G. O. Jordan, upon the activities of the inspectorial staff during the year.

The examination of the milk samples shows that the average chemical quality of the samples is again very good indeed, the percentage of fats, 4.24%, being almost the same as that of last year and

higher than in any year prior to that. The tables giving the results of the samples of individual vendors show once again that almost without exception they maintain a uniformly high standard of chemical quality.

The results of the bacteriological examination of milk are also included in the report, the examinations having been conducted as before by the Milk Research Laboratory, to the Director of which, Dr. H. E. Albiston, we are again much indebted.

As in former years, samples were taken from milk of the firms supplying milk under the Council's subsidised scheme, of one firm supplying institutions, and of carts in course of delivery.

During former years, the results of bacteriological examinations have tended to improve, but this year they show, unfortunately, a deterioration. The average bacteriological count, both by the direct microscopic method and by the method of culture, is higher than it has been for some years. The extent of the deterioration is illustrated by Mr. Jordan's statement that whereas last year 38 per cent. of the samples examined gave a microscopic count of less than 20,000, which indicates a high degree of cleanliness, this year only 26 per cent. of the samples attained this high standard.

The deterioration is almost certainly to be explained by the state of national emergency which has, no doubt, embarrassed all branches of the trade in respect of labour and materials, and to that extent it may be regarded as excusable. The deterioration is discernable in all the sources of supply.

An encouraging feature of the situation is shown in the results of the phosphatase test, which is an indication of the efficacy of the actual process of pasteurisation. The results of this test are rather better than in former years. It might be expected that this improvement would manifest itself in the counts of germs in the milk. That this is not the case is probably to be explained by the fact that the original contamination of the milk before pasteurisation was greater than usual, and that more difficulty was experienced in the sterilisation of plant and in the handling of the milk after pasteurisation.

The circumstances as a whole indicate again how desirable it is that the handling of an essential, highly perishable, and potentially dangerous commodity such as milk, should be very carefully supervised, which is very difficult to ensure unless the industry, particularly in the branches of distribution and treatment, is co-ordinated and amalgamated more than is at present the case.

## HOUSING.

In his report, Mr. Jordan gives a detailed account of the very extensive housing work which was carried out by the Department acting as agents for the Housing Commission.

As already mentioned, it was, unfortunately, necessary, owing to the increasing gravity of the war situation, to suspend the policy of demolition of insanitary houses and the erection of new houses, and to adopt a policy of preserving, as far as possible, the existing housing accommodation.

## AIR RAID PRECAUTIONS.

Reference was made in my last report to the work of Mr. H. Boyd in the organization of the First Aid section of the A.R.P. services in the City, and during the year 1941 it has become even more apparent that the Council was fortunate in being able to avail itself of Mr. Boyd's services. In his capacity as Deputy First Aid Commandant for the City, he has been indefatigable in organising, staffing and the equipping of the 12 First Aid Posts, three Mobile Units, the stretcher parties and the various depots and stores which have been set up.

The personnel actually attached to First Aid Posts and Mobile Units comprises at present approximately 1100 women and 450 men, and, in addition to this, training in First Aid has been given to several thousand other men and women serving in other branches of A.R.P. services or as First Aid personnel in the many hundreds of air raid shelters located in the City.

The community is greatly indebted to Mr. Boyd's capable assistants, and also to the medical and administrative officers and whole personnel of the various units who have devoted much care and time to the service for which they have volunteered.

## STAFF.

During the year, the Department suffered sad loss in the deaths of Sister N. Walsh and Mr. W. L. Wood. Sister Walsh had been in charge of the Welfare Centre and work in the Kensington district since 1930, was an extremely capable and conscientious worker, and her death was keenly felt both by ourselves and by the families of her district. Sister Pannell was appointed to fill the vacancy.

Mr. Wood was the son of Senior Inspector Wood, and though he joined the staff only in 1939, Mr. Wood, Jnr., had proved himself a very capable and agreeable colleague, whose loss was very deeply felt. His place was taken by Mr. R. L. Richards.

In conclusion, I would again express my best thanks to the whole of the staff and my appreciation of the work they have carried out during the year.

Yours faithfully,

JOHN DALE, O.B.E., M.D., B.Sc., (Public Health),  
Medical Officer of Health.

# Child Welfare.

Health Department,

Town Hall Chambers, Melbourne.

17th April, 1942.

The Medical Officer of Health,  
Sir,

I have the honour to report on the work of the Health Centres for the year 1941.

The health of the children was generally satisfactory, and, apart from diphtheria, there was no epidemic of infectious disease. There were no deaths from diphtheria in children under two, but, unfortunately, the pre-school mortality rate was raised by the deaths of five pre-school children from this disease. Four of these children were unimmunized immigrants to the City, and the fifth one was a City child whose parents had refused immunization.

The neonatal death rate, which in 1940 appeared unusually high, viz., 42.2, returned to a more normal figure in 1941, viz., 24.6. In 1940, the high neonatal death rate recorded was partly due to the fact that a number of mothers who were not City residents (7 out of 51) gave a City address, and partly due to the large proportion of twin children who died (10 out of 18 born). In 1941, all of the mothers of notified neonatal deaths were located in the City, and there were only three deaths out of thirty twin children born alive.

The death rate in infants between one month and one year, viz., 12.3, was a little higher than that of 1940, viz., 11.9.

The following table shows the number of children and mothers dealt with in the Centres:—

	Council Centres		Other City Centres		Total	
	1940	1941	1940	1941	1940	1941
No. of new babies attending	1081	1092	241	308	1322	1400
No. of individual babies under 1 year	—	1065	—	298	—	1363
No. of individual babies between 1 and 2 years	—	981	—	132	—	1113
Total number of individual babies under 2 years	1951	2046	331	430	2282	2476
Total attendances of babies under 2 years	22,135	24,459	4129	5171	26,264	29,630
No. of new expectant mothers	226	138	38	38	264	176
No. of individual expectant mothers	263	211	38	23	301	234
Total consultations with expectant mothers	789	427	113	115	902	542
Visits by nurses to mothers or babies	4936	5035	763	898	5699	5933
No. times babies referred to doctor or hospital	454	365	101	110	526	475
No. children new to pre-school sessions	781	717	7	6	788	723
No. of individual pre-school children	1503	1645	34	43	1537	1688
Total attendances of pre-school children	4992	5952	176	205	5168	6157
Visits or consultations by nurses re pre-school children (apart from sessions)	2444	2519	—	—	2444	2519
No. of pre-school children examined at Kindergartens	262	313	—	—	262	313

## LECTURES IN MOTHERCRAFT.

Lectures and examinations were given by Sister Shaw in the City State Schools. Forty-two girls obtained Special Certificates, sixty-five passed and twenty-eight failed.

## MILK AND ACCESSORY FOOD SUPPLY FOR CENTRE ATTENDANTS.

The amount of wet milk supplied through the Centres was 9067 pints (of which 299 pints and 28 pints were supplied to families with tuberculosis and infectious disease respectively) and 36,283 lbs. of dried milk (of which 48 lbs. were supplied to tuberculous families and 63 lbs. to old poliomyelitis cases). This was 14,686 pints less wet milk and 16,114 lbs. less dried milk than in 1940.

The total number of recipients during 1941 was 1084, the average number at any one time being 630. The total number of recipients in 1940 was 1107, the daily average number of recipients being approximately 850.

Miss Crisp reports that the decreased amount of milk distributed followed a generally improved financial position. Wage increases and child endowment payments enabled many mothers to buy fresh milk for themselves. Re-housing removed other families from our area.

The character of the distribution changed from a regular supply for families on sustenance or low incomes to a less regular supply for families financially embarrassed through temporary sickness or "short time," for families of a few casual workers and for large families with more than five members, trying to live on the basic wage. Thus, although the quantity of milk distributed decreased, the number of individuals helped was not altered to any great extent.

Fifty-three gallons of syrup containing vitamin concentrate and iron were distributed as against ninety-four gallons in 1940. State Relief money was used for only a few nursing and expectant mothers.

## BREAST FEEDING IN CENTRE BABIES.

Of those under 3 months of age—

	1940	1941
There were entirely breast-fed .....	67.3% }	63.9% }
There were partially breast-fed .....	12.2% }	15.7% }

Of those between 3 and 6 months of age—

There were entirely breast-fed .....	45.7% }	43.7% }
There were partially breast-fed .....	17.2% }	10.3% }

Of those between 6 and 9 months of age—

There were entirely breast-fed .....	34.3% }	31.7% }
There were partially breast-fed .....	11.5% }	10.4% }

## MATERNAL MORTALITY.

We received eight notifications of deaths connected with pregnancy, labour or the puerperium.

The causes of the eight deaths were as follows:—

Septicaemia, following abortion (Coroner's cases) (M—married, S—single) (31 M, 32 M, 36 S, 25 S) .....	4	All died at the Women's Hospital. None were known to the Centres.
Albuminuria of pregnancy and hypertension (39 M) .....	1	Died at a private hospital. Not known to Centre.
Uraemia, acute and chronic nephritis (29 M) .....	1	Died at the Women's Hospital. Known to Centre.
Toxaemia, haemoperitoneum ectopic (32 M) .....	1	Died at the Women's Hospital. Not known to Centre.
Pulmonary tuberculosis associated with pregnancy (31 M) .....	1	Died at the Women's Hospital. Not known to Centre.

## BIRTHS AND INFANT MORTALITY.

The number of births notified during the year was 1264, and the number of infant deaths 46 (31 of them being neonatal). After allocation to the City, by the Government Statist, of 39 births and 2 infant deaths, the death rate was computed as 36.8, the neonatal death rate being 24.6 and the death rate of those aged between one month and one year 12.3.

Thirty-two twin children were born, 12 being in a first pregnancy, 10 in a second, 2 in a third, and 8 in a fourth pregnancy. Of the three deaths of twin children, one was in a first pregnancy, one in a second and one in a third pregnancy. There were two still births among the 32, one in a first and the other in a third pregnancy.

## INFANTILE DEATH RATES IN THE LAST 10 YEARS.

	Neonatal (under 1 month)	Between 1 month and 1 year	Total
1932 .....	27.1	30.9	58.0
1933 .....	26.4	21.3	47.7
1934 .....	30.4	19.6	50.0
1935 .....	26.0	23.3	49.2
1936 .....	24.8	29.2	53.9
1937 .....	28.1	13.6	41.7
1938 .....	26.0	13.8	39.8
1939 .....	26.2	10.0	36.2
1940 .....	42.2	11.9	54.1
1941 .....	24.6	12.3	36.8

## NEONATAL INFANT MORTALITY.

The causes of the 31 neonatal deaths notified in 1941 were as follows:—

Prematurity .....	16	Congenital heart .....	3
Atelectasis .....	2	Erythroblastosis foetalis .....	1
Asphyxia .....	3	Anuria and general oedema .....	1
Inanition .....	1	Bronchopneumonia .....	1
Cerebral haemorrhage .....	3		

Investigation of the 31 neonatal deaths showed that 29 had antenatal attention (20 from private doctors, 6 from the Women's Hospital and 3 from the Queen Victoria Hospital). Seventeen were born in private hospitals, 8 in the Women's Hospital, 4 in the Queen Victoria Hospital, and 2 in their own homes. In only two were the fathers unemployed and those only during a part of the mother's pregnancy. All the mothers gave a history of having what appeared to be a sufficient and generally accepted diet.

## Deaths between 1 Month and 1 Year.

The causes of the 15 deaths notified at this age were as follows:—

Bronchopneumonia .....	2	Bronchopneumonia with Pink Disease .....	1
Bronchopneumonia with congenital heart disease .....	2	Pneumonia .....	1
Bronchopneumonia with pyloric stenosis .....	1	Pneumonia with gastroenteritis .....	1
Bronchopneumonia with congenital bowel obstruction .....	1	Pneumonia with foetal erythroblastosis .....	1
Bronchopneumonia with diarrhoea .....	1	Tuberculous bronchopneumonia .....	1
		Gastroenteritis .....	2
		Accidental fall .....	1

Of these 15 children who died, only 4 could be regarded as satisfactory Centre attendants, viz., 2 bronchopneumonia cases, 1 tuberculous bronchopneumonia and 1 accidental fall.

Notes on the 15 deaths are as follows:—

- (1) Bronchopneumonia, 9 months. Satisfactory Centre attendant; advice followed; fed on dried milk, educational diet and additional vitamins. Weight and general progress always satisfactory except for a mild otorrhoea at five months of age.

- (2) Bronchopneumonia, 10 months. Attended Centre only twice. Mothercraft very poor and did not follow advice as to feeding and routine, though dried milk and extra vitamin was supplied through the Centre. Five other children in family.
- (3) Bronchopneumonia with congenital heart disease, 4 months. Very little Centre advice given; attending hospital all its life.
- (4) Bronchopneumonia with congenital heart, 7 weeks. Too frail to be brought to Centre; visited in its home and admitted early to hospital.
- (5) Bronchopneumonia with pyloric stenosis, 7 months. Attended Centre twice for weighing only; attending hospital all its life.
- (6) Bronchopneumonia with congenital bowel obstruction, 5 months. Attended Centre for weighing only; advice and dieting by its own doctor all along.
- (7) Bronchopneumonia with diarrhoea, 6 months. Satisfactory Centre attendant, following advice; fine healthy-looking baby with satisfactory weight and general progress. All adults in the house had "heavy colds" and apparently infected the baby.
- (8) Bronchopneumonia with Pink Disease, 7 months. Attended Centre very little. Advice not followed; mothercraft very poor.
- (9) Pneumonia, 5 months. Died at a Bush Nursing Hospital in the country. Never attended a Centre; was home-visited, but did not wish for advice. Father and mother were both working and child was cared for by a grandmother; was fed on dried milk, but without vitamin additions.
- (10) Pneumonia, alkalosis, gastroenteritis, 5 months. A very frail twin baby who had been cared for in a Babies' Home from soon after birth because of its frailty.
- (11) Pneumonia and foetal erythroblastosis, 2 months. Transferred direct from the maternity hospital to a mothercraft home on account of its frailty.
- (12) Tuberculous bronchopneumonia, 5 months. Attended Centre regularly and followed advice. The mother had been found, in the Centre, to have signs of tuberculosis and was sent to hospital. The grandmother continued regularly to bring the baby, who appeared to progress satisfactorily for several months when it came in contact with whooping cough. Though it was sent for prophylactic injections it developed a cough about 3 weeks later, and died 5 days after that.
- (13) Gastroenteritis, 5 months (a Coroner's case). Attended Centre occasionally, but there was complete absence of co-operation and very unsatisfactory mothercraft.
- (14) Gastroenteritis, 2½ months. Not known to Centre; could not be located; probably boarding in City for a short time.
- (15) Accidental fall from an upstairs window, 8 months. A fairly regular Centre attendant; progressing satisfactorily.

#### **Deaths in Children between 1 and 2 years of age.**

Bronchopneumonia, 1 year. (Did not attend Centre, a congenital syphilitic under private treatment .....	1
Whooping cough and pneumonia, 1 year 6 months. (Centre attendant, well fed and well cared for —private doctor) .....	1
Influenza Meningitis, 1 year 1 month. (Centre attendant, well fed and well cared for) .....	1
Motor Accident, 1 year 4 months. (Not known to Centre—recent arrival in the City) .....	1

#### **Pre-School Mortality.**

There were 12 deaths in children between 2 and 6 years of age as against 4 in 1940. Causes were as follows:—

Enterocolitis (3 years) .....	1
Diphtheria (2 years, 2 years, 2 years, 3 years, 5 years) .....	5
Cholaemia and acute nephritis (3 years) .....	1
Acute poliomyelitis (5 years) .....	1
Acute pyelonephritis (4 years) .....	1
Cerebellar hydatid disease (3 years) .....	1
Accidental burns (4 years) .....	1
Motor car accident (5 years) .....	1

Only one of these cases was known to the Centres, viz., the acute pyelonephritis case, which attended the Centre on two or three occasions. It suffered from chronic coeliac disease and was under regular treatment at the Children's Hospital.

#### **KINDERGARTENS.**

Medical examination of the children attending the Kindergartens in the City was carried out. By arrangement with the Commonwealth, special time is devoted to intensive supervision, examination and recording at the Lady Gowrie Child Centre. Other kindergartens whose attendants were examined were Bouverie Street, Exhibition Street, Lady Huntingfield, St. Martin's, St. George's, St. Jude's, St. Mary's Church of England, St. Mary's Roman Catholic, St. James', St. Alban's.

We are fortunate in having some very good kindergartens, but kindergartens which house children in the day time and teach them habits of personal cleanliness in satisfactory surroundings are offset by many poor houses. Universal personal and household cleanliness is hardly to be expected when there are real difficulties in acquiring and maintaining it. Families removed to houses newly

built by the Housing Commission have these difficulties very much diminished, of course, but there are still many people, with moderate or large families, in poor houses without adequate bathing and laundering facilities, and, unless something can be done to help this situation, it is certain there will remain a lower standard of hygiene than is desirable or desired by the people themselves. Scabies and impetigo are amongst us, though, fortunately, not very common in the summer. Pediculosis is comparatively common. These infections are almost certainly worse in winter, when personal bathing and laundering and drying of clothes is infinitely more difficult than in the summer.

I venture to suggest that a small municipal building in an accessible spot, where whole families could obtain good hot baths for a small fee and where mothers could bring their laundry and do it under good modern conditions, also for a small fee, would be a valuable asset in any congested and poor area of the City. I reported in 1936 on a type of laundry which I had seen in Edinburgh, which belonged to the municipality, and which was successfully financed by the very small entrance fees charged. Mothers brought their dirty clothes and were able to adequately wash and disinfect, dry and mangle them, and take them home again in less than one hour.

This may not be an appropriate time, in some ways, to consider such a building, but in other ways its desirability becomes more apparent when war conditions may necessitate sudden moves of large groups of people, and when household labour and family difficulties need to be reduced to a minimum, in order to liberate energy and time for national work; and, indeed, war or no war, it seems high time we should discard mediaeval conditions and make available the commodities needed to ensure a reasonable standard of hygiene.

#### **OBITUARY.**

The Department suffered a sad loss in the death of Sister N. Walsh, who, since 1930, had been in charge of the Welfare Centre and work in the Kensington district. Sister Walsh was an extremely capable and conscientious worker, whose death was keenly felt both by ourselves and by the families of her district. Sister Pannell was appointed to fill the vacancy.

#### **ACKNOWLEDGMENT.**

I wish to record my appreciation of the efficient work and co-operation of the Sisters and of all voluntary helpers who have so generously given their assistance, and to express my thanks.

HILDA E. KINCAID, D.Sc., M.B., B.S.

# Infectious Diseases.

Health Department,

Town Hall Chambers, Melbourne.

12th May, 1942.

The Medical Officer of Health,

Sir,

I have the honour to submit a report on the incidence and control of infectious diseases in the City of Melbourne for the year 1941.

## DIPHTHERIA.

TABLE I.

Year	No. of Cases	Cases per 100,000	Deaths	Case Fatality	Fatality per 100,000
1915-24 (average) .....	373	355	14	3.7	13.3
1925-34 (average) .....	230	239	6	2.9	6.9
1935 .....	257	266	7	2.7	7.5
1936 .....	241	259	5	2.0	5.4
1937 .....	127	137	2	1.5	2.2
1938 .....	103	111	1	1.0	1.1
1939 .....	110	118	2	1.8	2.1
1940 .....	100	106	2	2.0	2.1
1941 .....	235	246	9	3.8	9.3

The anticipated rise in the incidence of diphtheria struck the City with almost dramatic suddenness. The peculiarity of the epidemic was the occurrence within the Metropolitan area of localised outbreaks of diphtheria of a much more severe type than has been experienced for many years. This affected a number of municipalities, including the City of Melbourne. In most cases it was associated with the gravis type of the organism, though the intermedius type was also responsible for severe cases. In our experience, there had never been so many cases reported to the parents as being on the danger list at the Infectious Diseases Hospital, and, though the majority recovered, the death rate was unusually high. The fact that the regular sessions for immunization had twice been interrupted during the previous five years, by the occurrence of the epidemic of poliomyelitis in 1937-8, and of measles in 1939, probably left many vulnerable who would otherwise have been protected, although in anticipation of an inevitable rise in incidence, the immunization campaign had been intensified in 1940.

Owing to the public alarm at the occurrence of so many severe cases, and the publicity given to the matter in the Press, the demand for immunization was unprecedented, not only in the City, but throughout the Metropolitan area and the rest of the State. It is reasonable to argue that if the public had been more willing in the earlier years to take advantage of the facilities which were offered, and unceasingly advocated by the authorities, much of the damage could have been avoided.

The shifting nature of the population, due to war conditions and to exodus of many of our protected children to the outer suburbs, and their replacement by a more vulnerable section, also had an adverse effect on the course of the epidemic in the City.

The number of children immunized was higher than it has been since the work was begun in 1925, and the fact that the number of pre-school children immunized was practically equal to the number of births for the first time, is a notable advance. All authorities agree that unless a majority of children in the first age group are protected, any marked effect on the general rate of incidence cannot be expected, although, as an individual measure of protection, its value cannot now be questioned.

### Incidence.

There were 235 cases of diphtheria, 118 in males and 117 in females. This is more than double the number in 1940, and illustrates the sudden increase to a figure higher than any since 1936.

### Deaths.

As distinguished from the increase in prevalence, the much greater severity in type of the disease is shown in the high death rate. The case fatality rate was 3.8, and the fatality rate per 100,000, 9.3. These figures have not been exceeded since 1928, when the case fatality was 5.3, with a fatality rate per 100,000 of 9.8. In 1933, for instance, the highest peak of incidence since the establishment of a section in the Health Department to deal with infectious diseases, although the case rate per 100,000 was 333, the case fatality rate was only 1, and the fatality rate per 100,000, 3.2.

The deaths were all due to malignant diphtheria, an extremely toxic and resistant form of the disease, and associated with the gravis type of the organism. There were no deaths in our area, for instance, from laryngeal diphtheria, generally associated with the mitis type of organism, which is often a feature of an epidemic prevalence.

Six of the deaths were in males, and 3 in females. All the deaths were from toxic myocarditis, and reports show that they were of the most severe type ever seen here. The particulars are as follows:—

Male	Age	Duration	Female	Age	Duration
J.B.	8	8	R.M.	6	26
J.T.	5	12	P.M.	2	11
N.S.	2	17	M.C.	2	14
T.C.	3	13			
M.A.	9	10			
A.M.	9	10			

Every case was severely ill on admission. Owing to the oedema of the parts, in several cases diagnosis had been delayed, and other conditions, such as mumps or quinsy, suspected. In seven out of the nine cases the heart symptoms developed less than five days before death.

#### Rates.

The rate per 100,000, 246.33, is much higher than for the last five years. There was also a rise in incidence in the nine adjacent municipalities. In two districts, the rates were 442 and 668 respectively, while in two others the rate was only 70. This illustrates the patchy nature of the prevalence. The average rate for the nine adjacent municipalities was, therefore, slightly lower than that for the City, 217.2.

The rate for the Metropolitan area was 166.6, compared with 78.8 in 1940.

TABLE. II.

#### AGE INCIDENCE.

Age	Males		Females		Percentages
	Cases	Deaths	Cases	Deaths	
0-1 year	—	—	2	—	
1 year	1	—	2	2	
2 years	6	1	6	—	
3 years	19	1	8	—	
4 years	9	—	4	—	
5 years	13	1	11	—	
6 years	11	—	14	1	
7 years	10	—	16	—	
8 years	9	1	6	—	
9 years	10	2	2	—	
10 years	3	—	6	—	
11 years	3	—	4	—	
12 years	5	—	5	—	
13 years	6	—	3	—	
14 years	3	—	3	—	
Adults	10	—	25	—	14.9%
Totals	118	6	117	3	
			Cases 235		Deaths 9

#### Institutional Cases.

The number of institutional cases was very low—only 15, or 6.4%. Two occurred in a public hospital, 12 in institutions for children, and two in educational establishments.

TABLE III.  
NUMBERS OF INSTITUTIONAL AND GENERAL CASES.

Year	Total	Institutional	General
1931	308	27	281
1932	310	40	270
1933	307	86	221
1934	215	31	185
1935	257	38	219
1936	241	21	220
1937	127	9	118
1938	103	22	81
1939	110	53	57
1940	100	37	63
1941	235	15	220

#### Diphtheria in Families.

The number of multiple cases in families was so alarming that it was decided to give antitoxin to younger exposed children who had not been protected, and to advise their immunization later. However, most of the cases were contemporaneous, so that although the antitoxin presumably reduced the incidence, it could not prevent a large number of the multiple infections.

In 25 families there was more than one individual affected, and these 25 families accounted for 59 cases. In 17 instances there were two cases, in seven there were three, and in one, four cases of diphtheria in the one family.

#### Diphtheria in Individuals Previously Treated.

There was an increase in the number of children who had had some protective treatment and later contracted diphtheria, 14 giving the history of attendance for immunization. This fact lends some support to the theory put forward by O'Meara that the diphtheria toxin consists of at least two components. Ordinarily the A is predominant, and, as the standard toxin used in the preparation of anatoxin and antitoxin is rich in this component, it gives, as a rule, effective protection both for

prophylaxis and treatment. But when a malignant strain is prevalent, and the component B is increased, the protection given by standard materials is less efficient. It is claimed that some success has attended the use of a toxin rich in the B component as an antigen, but although the work is suggestive, it has not been generally accepted. It would be interesting to see if further research confirms these claims.

The following is a list of these cases:—

1. Aged 2	Two doses 1941.
2. " 3	Two doses 1941.
3. " 4	One dose 1941.
4. " 4	Immunized—re-tested in 1939, negative. Technical diphtheria.
5. " 5	Very sensitive to Schick test 1941. Two doses.
6. " 9	Two doses 1938.
7. " 6	One dose 1941.
8. " 6	Two doses 1939.
9. " 3	One dose 1940.
10. " 8	One dose 1940.
11. " 7	Three doses, re-test negative 1936.
12. " 13	Two doses 1936.
13. " 6	One dose 1941.
14. " 9	Two doses 1941.

Of the seven children who had two doses, three were under six and had received only the two smaller doses of the course of three usually given, and were, therefore, incomplete. Of the other four, two had not had time to become completely immune. The other two would be among the ten per cent. of children of school age who require re-testing and a second course of treatment. The other children, having only one dose, could not expect any effective immunity. The only child who had been immunized and re-tested, that is, the only case which might be considered unsatisfactory, was in a girl of 7 who had recently had a severe attack of whooping cough and bronchopneumonia, and whose resistance was apparently lowered at the time.

The cases were not severe, and there were no deaths. That there was some immunity was shown by the fact that in several instances the gravis strain of the organism produced only a minor illness.

### Swabs.

All contacts of cases of diphtheria are swabbed, and of 1169 swabs, 110 were positive. Some of these were incubating diphtheria, but the majority were persistent carriers. In eight families, for instance, 82 swabs were taken from 15 individuals, who carried the germ persistently for many weeks without any evidence of illness. Virulence tests were carried out in such cases to ascertain if the infection was of a virulent or non-virulent type.

### Carrier Rate in a Sample of the Metropolitan Population.

Swabs were taken in every case on admittance to one of our largest institutions for children.

One thousand and fifty-eight (1058) swabs were examined, of which 13, or 1.2, were positive. These 13 swabs were further examined for virulence, and 4 were positive.

It is interesting to note that this carrier rate has practically remained stationary, in spite of the great increase in prevalence of diphtheria in the Metropolitan area since the last quarter of 1940.

TABLE IV.

	No. Examined	Negative	Positive	Virulent
1939	1688	1665	23	7
1940	964	952	12	1
1941	1058	1045	13	4

### Immunization.

As there was great public interest in immunization against diphtheria, it was decided that not only pre-school children and the younger members of the school population should be offered protection, but that the older children also should be given the opportunity to be tested.

The policy of doing only the children under 10 years of age, in a district where usually each school is visited once a year, was justified by the very small number in the 10-14 group who needed protection. Many had been tested more than once, and were dismissed without testing, but those who had not previously been re-tested were done, and practically all showed that their previous treatment had been successful.

However, not only was there a large increase in the number presenting, but the number who were immunized was more than twice the yearly average. Altogether, 2698 received immunizing doses; of these, 2470 received either two or three doses and have a reasonable chance of being protected.

The attendance at the pre-school sessions was particularly satisfactory, and if this could be kept up, there would be little need to do the work in the schools, except at intervals, to pick up recent arrivals in the district.

## Pre-School Immunizations.

TABLE V.

Year	Total Individuals	Immunized			Two or three doses
		1	2	3	
1940	741	63	72	365	437
1941	1462	73	136	980	1116

For over two years, two doses of alum-precipitated toxin has been used for the younger children in one of our large institutions. It is now proposed to use this material at the Health Centres for children under six years of age. Children under three years do not need testing, and in many clinics this is not done until six years of age. However, in view of the "salting" of a crowded City area, we do the test in children over three years of age. In this way, one visit is cut out, and a reasonable measure of protection acquired in a shorter time than with toxoid.

TABLE VI.

Institution	Total Presenting	Schick Negative	Schick Positive	Not Immunized	Not Recorded	Immunized 1	Immunized 2	Immunized 3
Health Centres	1462	228	106	25	24	73	136	980
Hospitals and Institutions	973	378	461	46	27	85	254	186
State Schools	2252	1307	762	100	183	105	538	19
Kindergartens and Catholic Schools	1045	524	456	34	65	65	261	96
Totals	5732	2437	1785	205	299	228	1189	1281
								2470

Not immunized.—Schick positive cases whose sensitivity prevented their being treated, or who were reported to suffer from allergic conditions.

Not recorded.—Attended for testing and reading of Moloney test only. Absent for Schick reading and immunization.

## SCARLET FEVER.

TABLE I.

Year	No. of Cases	Cases per 100,000	Deaths	Case Fatality	Deaths	
					per 100,000	per 100,000
1931	246	256.23	3	1.22	3.123	
1932	209	222.23	1	0.48	1.060	
1933	131	142.20	1	0.76	1.080	
1934	100	108.00	—	—	—	
1935	73	77.00	—	—	—	
1936	70	75.30	—	—	—	
1937	50	53.80	—	—	—	
1938	202	217.43	1	0.49	1.090	
1939	325	348.00	1	0.30	1.100	
1940	244	260.00	1	0.41	1.062	
1941	240	251.00	—	—	—	

The number of cases of scarlet fever remained about the same; but the number of cases in the 5-9 age group was unusually high. The predominance of cases in females over males is always a feature of the incidence.

There were 240 cases in 1941, compared with 244 in 1940; 87 cases were in males and 153 in females. Most of the cases were relatively mild, and many were nursed at home; but the occurrence of complications such as nephritis and adenitis in children who gave a history of a mild sore throat within the previous three weeks, shows how easily cases are missed when the symptoms are ill-defined.

The prevalence in the adjacent municipalities was also high, and in six of the nine the rate was higher than that for the City. In three cases the rate was over 300, and in one 400. The average rate was 313.3 per 100,000, while that for the City was 251.

There were no deaths from scarlet fever during 1941. For the last ten years the death rate has not averaged more than 1 per 100,000.

TABLE II.  
AGE INCIDENCE OF SCARLET FEVER.

	Males	Females			Percentages	
					1941	1940
0-1 year	—	—	20 Males 14 Females			
1 year	2	1				
2 years	4	2				
3 years	6	5				
4 years	8	6				
5 years	7	13	34 Males 55 Females			
6 years	8	10				
7 years	8	14				
8 years	6	5				
9 years	5	13				
10 years	5	3	15 Males 24 Females			
11 years	5	8				
12 years	5	7				
13 years	—	4				
14 years	—	2				
15 years and over	18	60	18 Males, 60 Females	equals	32.4%	34.0%
Totals	87	153	240			

### **Scarlet Fever in Families.**

In eleven families more than one case of scarlet fever occurred, making 27 cases in all. In seven instances there were two cases; in three, 3 cases; and in one, 4 cases were notified.

### **Scarlet Fever in Institutions.**

There were 63 cases in institutions, of which 21 in a public hospital, and 18 in an institution for children, constituted more than half of the total. Forty-six cases occurred in public hospitals, chiefly among the nursing staffs.

Figures for the five previous years were 5 in 1937, 69 in 1938, 101 in 1939, 56 in 1940 and 63 in 1941.

### **Swabs.**

In the case of scarlet fever routine swabbing is not undertaken, owing to the great prevalence among the population of organisms similar to those causing scarlet fever. However, where the history suggests a missed case among contacts, or where an unhealthy condition of nose or throat leads to the suspicion of a carrier condition, swabs are taken. In many cases "typing" of the organism is necessary to prove its relationship to the infection being investigated. One hundred and forty-five swabs were taken, and of these 86 were positive, and where it was considered advisable, the organism was typed.

## **DIPHTHERIA AND SCARLET FEVER IN RELATION TO SOCIAL CONDITIONS, ETC.**

From the investigation forms on which details of all infectious diseases in the City are recorded, information has been collected on certain social and economic conditions among the families affected. Records are available for 250 families.

Illustrating the influx into the City due to war conditions, it is interesting to note that only 55 per cent. of the families visited had lived in the City for over five years, compared with 70 per cent. in 1940. New residents, particularly from country areas, are always more vulnerable to infections, as usually they have neither had the opportunity of meeting the germs and developing some natural immunity, nor, in the case of diphtheria, of receiving active immunization by the health authorities. Nearly 28 per cent. of the families affected had been residents of the City for less than one year, compared with 10 per cent. in 1940.

The figures for unemployment were again low, corresponding to the increased industrial effort due to war production. Only 8 per cent. of the heads of these households were unemployed, the majority being due to illness or change in their usual type of work. The figure for 1940 was 10 per cent.; but less poverty and hardship among those technically "employed" was observed this year. Only 15 per cent. were in any of the Services.

The housing problem does not show any worsening of conditions. In 1115 rooms there were 699 adults and 609 children, a total of 1308 individuals, or about 1.1 per room.

Only 56 per cent. of the houses examined were considered to be good, 18 per cent. were bad, and 26 "indifferent."

Of 589 children, where information was obtained of previous infections, 184, or 31 per cent., had suffered from diphtheria, and 128, or 22 per cent., had had scarlet fever. These are very high rates in a sample of the population, and suggest that increased opportunity of infection, owing to overcrowding, or diminished natural resistance, or both factors, must have played a part in causing such a high percentage of infections. Only 31 per cent. of 461 children where information was available had been immunized, the majority, of course, being cases of scarlet fever, as only in a very few instances was there a case of diphtheria among immunized children.

## **TUBERCULOSIS.**

The following report on the occurrence of tuberculosis in the City is based on the analysis of her work, supplied by Sister Frongerud, who is the Health Visitor in charge of this section.

The total number of individuals under supervision has remained almost constant in the last three years—311 in 1939, 311 in 1940, and 308 in 1941. Of these, 178 were males, of whom 9 were repatriation cases, and 15 were "wanderers" (of no fixed address), and 130 were females, of whom 8 were "wanderers."

**TABLE I.  
AGE DISTRIBUTION.**

	Males	Females	Total
0-4 years	3	1	4
5-9 years	1	—	1
10-14 years	2	1	3
15-19 years	6	9	15
20-24 years	11	21	32
25-34 years	35	40	75
35-44 years	42	31	73
45-54 years	37	14	51
55-64 years	27	10	37
65 and over	14	3	17
Unknown	—	—	—
Totals	178	130	308

The age group 15-24 shows the usual preponderance of females 30 to 17; in the other groups males, on the whole, are more affected.

#### New Cases.

There were 150 new cases, 87 males and 63 females, a slightly lower figure than in 1940, when there were 170 new cases, 116 males and 54 females. Of these, 13 died within the year.

#### Deaths from Tuberculosis.

The total deaths were 68, 40 males and 28 females. This is lower than in 1940, when there were 88 deaths, 62 males and 26 females. All were from pulmonary tuberculosis, except two from tubercular meningitis.

K.B., aged 46 years. Had tubercular spine for years. She developed meningitis two weeks before death.

M.M., aged 56 years. Had been frail for years, but tuberculosis had not been suspected. Developed miliary tuberculosis and meningitis two weeks before death.

Of those who died, 15 (13 males and 2 females) were "wanderers," 15 died in Sanatoria, 31 in hospital, 21 at home, and 1 in the street.

Eight had been ill for less than one year, 26 between one and five years, 27 between five and ten years, and seven for more than ten years.

Twenty-nine were notified after death, 13 had been notified within one year of death, and 23 had been known for periods from 1-15 years, and three over 15 years.

TABLE II.  
AGE DISTRIBUTION OF DEATHS.

	Males	Females	Total
0-4 years	—	1	1
5-9 years	—	—	—
10-14 years	—	—	—
15-19 years	—	1	1
20-24 years	—	1	1
25-34 years	3	4	7
35-44 years	7	7	14
45-54 years	11	3	14
55-64 years	11	6	17
65 and over	8	5	13
Unknown	—	—	—
Totals	40	28	68

#### Sputum Tests.

Of 209 tests recorded, 80 were positive, 55 in males and 25 in females. One hundred and twenty-nine were negative, 78 in males and 51 in females.

#### Child Contacts.

There were 169 children living in houses where there was a case of tuberculosis, 48 where the case showed positive sputum and 121 where it was negative. Seventeen were repatriation cases. Of the children in contact with positive cases, 12 were under five years, 18 between five and nine years, and 18 between ten and fourteen years.

#### Admission to Sanatoria.

There were 74 admissions to Sanatoria, 41 males and 33 females.

It is interesting to note that so far war conditions have not affected the incidence of tuberculosis.

#### WHOOPING COUGH.

Towards the end of the year the Children's Hospital staff informed us that cases of whooping cough were being reported in our district, and that it was proposed to continue the prophylactic injection of vaccine to contacts. Arrangements were made to provide material for contacts in the City area, where prophylactic measures were advised. There was one death in a child of eight months.

#### CEREBRO-SPINAL MENINGITIS.

Though nothing in the nature of an epidemic of cerebro-spinal meningitis has occurred as it did during the last war, there has been a notable rise in prevalence. Owing to the great success attending the use of the sulphonilamide compounds, mortality from this disease, which was at least 30% in the last war, has now been greatly reduced, and the disease has, therefore, been robbed of much of its terror. Most cases have made a good recovery, and the distressing sequelae usually associated in the past with attacks have been very rare.

There were 14 cases of cerebro-spinal meningitis, 10 in males and 4 in females. In addition, 4 cases were notified among members of the services who had acquired the disease outside the City, and 2 in women sent to City hospitals from other places.

### **Age Incidence of Cerebro-spinal Meningitis.**

0-4 years—Two cases, males, aged fourteen months and four-and-a-half years.  
5-9 years—One male, aged 5.  
10-20 years—Three males, aged 12, 16 and 17 years, the last of whom died; and one female, aged 15.  
20-30 years—One male, aged 28, and two females, aged 20 and 22.  
30-40 years—Two males, aged 37 and 39; and one female, aged 35.  
Over 40 years—One male, aged 49.  
Total—10 males, 4 females.

No connection was found between any of the cases, and in only two instances was there any known contact with members of the fighting forces; one in a lad who had recently visited a camp and the other in a woman member of one of the auxiliary services.

There was one death, a youth of 17, who died in less than three days from the onset of symptoms.

In every case enquiries as to any connection with members of the military forces were made, but, although the increase is undoubtedly associated with a congregation of so many men in huts and camps, direct contact seemed to be a minor factor in our cases.

### **POLIOMYELITIS.**

There were two cases of poliomyelitis. One was in a boy of  $5\frac{1}{2}$  years, whose symptoms for two or three days were quite atypical. He collapsed suddenly from respiratory failure, and died in less than four days from the beginning of his illness.

The other case was in a boy of three years, who, by a strange coincidence, was living in a house affected during the last epidemic, and whose three most intimate contacts, one a cousin, had all been cases in 1937.

### **UNDULANT FEVER.**

There was one case of undulant fever in a lad of 17 years of age, who had the most extraordinary passion for drinking milk. He had consumed quantities of milk in all the suburbs he was sent to in his work as an electrician, so that no one dairy could reasonably be regarded as responsible.

### **HYDATIDS.**

An unusual case of hydatids, which had been baffling diagnostically, occurred in a boy of three years of age. The site of the tumour was the cerebellum, and the child died after seven months of illness. He had lived previously in Tasmania, but no history of contact with a dog could be elicited, the only animals kept being fowls.

### **TYPHUS FEVER.**

At the beginning of March, a case of suspected typhus fever was reported from a City hospital. The patient, a girl of 19, ultimately recovered. The nature of her illness was obscure for some weeks, and it was only when the typical Weil-Felix serum reaction was obtained that the diagnosis was clear.

Various theories as to the origin were discussed. The idea that it had been introduced in presents sent from the Middle East was rejected, because the period was too long for live ecto-parasites to survive. However, the occurrence of a case in a laboratory worker who was investigating the disease with faeces of infected lice sent from abroad suggests that such a solution, though unlikely, was possible.

Many rats in the neighbourhood were caught and their parasites examined, without result; but the occurrence of a case in another district suggests the possible presence here of endemic typhus, such as has been noted in other States.

In conclusion, I wish to express my appreciation of the work of Sister Dossetor, and of the members of the clerical staff and the Child Welfare staff, who co-operated so enthusiastically in the preventive work at the Health Centres. The Head Teachers and Infant Mistresses and staffs of the schools in the City also gave very generous help during the work in the schools.

Yours faithfully,

HILDA W. BULL, B.Sc., M.B., D.P.H.

# Reports of Dental Officers

105 Collins Street,  
Melbourne, C.1.  
1st May, 1942.

The Medical Officer of Health,  
Sir,

I have the honour to submit the seventh annual report for the Dental Section of the Kensington Baby Health Centre.

The following is a summary of the services rendered to those children who have visited the Centre:—

	1941	1940
No. of children examined .....	382	402
No. of new patients .....	160	216

## Summary of Treatments.

Visits .....	664	636
Treatments and fillings .....	50	18
General anaesthetics .....	49	35
No. of affected teeth removed under local anaesthetic .....	34	—
Malocclusion from comforter or thumb sucking .....	37	—
Severe gingivitis .....	2	—
Expectant mothers examined and advised .....	6	6

## Ages of Patients.

Of children presenting for examination:

42% were 1 year	6% were 5 years
25% " 2 years	9% " 6 years
18% " 3 years	

Therefore, 85% of the children were 3 years or under, and direction and advice was given to the mothers in order that their future dental health should be considered.

## THE EFFECT OF COMFORTERS AND THUMB SUCKING.

Of the children examined, approximately 8 out of every 100 showed varying degrees of malocclusion from these habits. Splints have been demonstrated for the prevention of thumb sucking; models have been made showing the effects of the comforter if its use is persisted in. Probably the shortage of materials on account of the war will prevent the manufacture of the comforter.

## GENERAL ANAESTHETICS.

All cases needing general anaesthetics have been sent to the Dental Hospital. Appointments have been made by telephone from the Centre. This has saved the mothers expense. I would like to express my sincere thanks to the staff of the pre-school clinic at this hospital, and especially to Sister Robson for her splendid co-operation at all times.

## DIET.

On the assumption that the carbohydrates in children's diet set up an acid condition in the mouth, which condition helps the growth of bacterial acidophilus, which seems to be the destroying organism in caries, I have strongly urged the use of an anti-acid mouth wash and have urged the use of unsweetened milk of magnesia as a mouth soak after meals. A large number of mothers have assured me that this is used daily, and in such cases the children's mouths are clean.

## "WHAT I EAT" BOOKS.

I would like to quote from two of these books that have been returned to me:—

### Case 1—Child aged 5 years.

MONDAY—Breakfast .... .... .... ....

Wheatmeal and milk. Wholemeal toast, honey and butter.

Noon Meal .... .... .... ....

Cold chicken, beans, carrots and parsnips, steamed cereal, jelly and custard.

Night Meal .... .... .... ....

Crust of wholemeal bread, butter and marmite. Mashed banana. One all-bran cake,  $\frac{1}{2}$  pint milk and an apple.

Between Meals .... .... .... ....

7.15 a.m., glass water; 11 a.m., marmite in water; 4 p.m., juice of two oranges.

TUESDAY—Breakfast .... .... .... ....

Whole cereal, milk ( $\frac{1}{2}$  pint), 2 pieces wholemeal toast, butter, honey, grapes and apple.

Noon Meal .... .... .... ....

Cold chicken, peas, pumpkin, tomato (steamed),  $\frac{1}{2}$  pint milk.

Night Meal .... .... .... ....

Baked apple and custard, 2 slices wholemeal bread, butter, honey, all-bran cake,  $\frac{1}{2}$  pint milk and piece apple.

Between Meals .... .... .... ....

7 a.m., treacle in glass water; 11 a.m., lemon drink and glucose, small raw carrot; 4 p.m., juice of two oranges.

**Case 2—Child aged 6 years.**

MONDAY	Breakfast ....	Fried egg on white bread, 1 apple, bread and jam.
	Noon Meal ....	Potato cakes and 3d. chips.
	Night Meal ....	Poached egg, banana custard, white bread and butter and mustard pickle, drink of milk.
	Between Meals ....	5 lollies, $\frac{1}{2}$ d. stick of lollie and 4 sweet biscuits.
TUESDAY	Breakfast ....	Tomato sandwich and drink of milk.
	Noon Meal ....	Three rounds of white bread and jam, two small cakes with icing.
	Night Meal ....	Curried chops, white bread and plum jam.
	Between Meals ....	One fruit chocolate, 1 ice block, 2 white knights, 4 biscuits and 1 banana.

Comment on these two samples is superfluous. In Case 1, real wholemeal bread only is used. Bakers have told me that brown bread is white bread coloured, and that it is difficult to get the public to appreciate real wholemeal bread. Case 1 has beautiful teeth. Case 2 has had most of the deciduous teeth extracted as they were badly broken down and abscesses had developed.

**Comment on Case 2 Record Card.**

First visit.—Very bad mouth, sugar and condensed milk used persistently on comforter. Needs general anaesthetic urgently and also extraction of all deciduous teeth.

Next visit.—Since teeth removed diet has been altered. Child has put on weight and mother now very enthusiastic about correct diet.

I very much regret the passing of Sister Walsh. She was most enthusiastic and helpful. She was very keen on the dental health of the children at the Centre. I greatly miss her enthusiasm and her wholehearted co-operation.

In conclusion, I would like to express my whole-hearted thanks to the staff at Kensington, and to the medical officers and the Town Hall staff for their fine courtesy and enthusiasm at all times.

J. W. BYRNE, B.D.Sc., L.D.S.

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Dental Hospital,  
Spring Street, Melbourne, C.1.

1st May, 1942.

The Medical Officer of Health,  
Sir,

I have the honour to submit the second annual report of the Dental Section of the Newry Street Health Centre.

The following is a summary of the number of children attending the clinic and the work performed for the year ending December, 1941:—

Number of visits to the Health Centre	421
Ages of children were as follows:—	
1 year ....	17
2 years ....	78
3 years ....	119
4 years ....	159
5 years ....	42
6 years ....	8
Number of new patients in the above	101
Number of children examined at the Kindergarten in third term	90

**Analysis of Work Performed.**

Number of prophylactic treatments	53
Number of fillings, deciduous teeth	277
Number of other operations, including temporary fillings, dressing and care of infected mouths	79
Number of teeth extracted with local anaesthetic	9
Number of children requiring no treatment	69
Number of general anaesthetic cases treated at Melbourne Dental Hospital	12

There is little difference in the type of work required this year with the 6 months of 1940; one could say that on the average there were less extractions.

Maintenance of function of dentine is the dentist's particular concern from the age of two years onwards. Impaired function through caries, which eventually causes toothache, abscesses, gum conditions and then loss of teeth, is well known. Also, teeth can erupt into positions that "lock" and limit the function of the denture. Mouth breathing is a common cause of malocclusion. In this the doctor and the parents can help the child. Fortunately, there have only been about 4 cases of malocclusion at the Newry Street Centre.

The young child requires very careful handling; he wants to know about everything that is being done for him; if his confidence is not won, the work is going to be difficult for the dentist. For this reason, I have missed the help of a dentist attendant during the part year.

The Lady Gowrie Kindergarten children will, in future, be examined each term at the Kindergarten. They have special charts, which are kept with their other cards.

I wish to thank Sister Elson, of the Lady Gowrie Kindergarten, for her assistance while examining the children and later drafting the work across to the Centre.

Thanks also to Sister Smith, who recruits the mothers with young children from the Newry Street Centre.

BEATRICE WOODCOCK, B.D.Sc., L.D.S.

# Report of Chief Health Inspector

The Medical Officer of Health,  
Sir,

Health Department,

Town Hall Chambers, Melbourne.

25th March, 1942.

I have the honour to submit a report for the year 1941 on the routine activities of the Department which are governed by the provisions of the following Acts and Regulations.

## ACTS AND REGULATIONS.

### Acts.

Health Acts, Local Government Act, Factories Acts, Police Offences Act, Fruit Act, Melbourne and Geelong Corporation Act, Goods Act, Births Notification Act, Slum Reclamation and Housing Acts.

### Regulations under Health Act.

Registration, Rat Destruction, Hairdressers' Shops, Offensive Trades, Seizure (Claims), Eating House, Camping, General Sanitary, Analysis, Septic Tanks, Cattle Sale Yards, Infectious Diseases, Cleanliness (Food), Food and Drug Standards, Nightsoil, Smoke Abatement, Tobacco Packages, Stream Pollution, Fire Prevention, Building (Tent), Boarding and Lodging House.

### Other Regulations.

Housing (Standard of Habitation) Regulations; Regulations under the Goods Act.

### By-Laws and Regulations.

By-Laws and Regulations of the Council relating to Places of Amusement, Public Buildings, Dancing Saloons, Fowl Yards, etc., are also administered by the Department.

## HOUSING.

### Insanitary Premises Dealt With Under Health Act.

Two hundred and fifteen premises, comprising 99 dwelling houses, 112 food premises, and 4 hairdressing saloons, were dealt with under the Health Acts. Of this number 52, consisting of 49 dwelling houses and 3 food premises, were demolished; 137 premises were repaired satisfactorily, whilst 32 were in various stages of progress at the end of the year. With regard to the sites of the demolished premises, 5 were used for the construction of single dwellings, blocks of flats were erected in 18 instances, and 29 were used for the extension of factory and business premises.

Since 1913 the number of insanitary premises in the City which have been demolished is 2093.

The following summary for the last decade shows the number of insanitary premises dealt with under the Health Acts, and the number demolished in that period:—

Year	Number	Demolished
1932	175	29
1933	174	36
1934	209	58
1935	258	106
1936	253	96
1937	302	78
1938	284	73
1939	319	72
1940	176	46
1941	215	52
Totals	2365	646

### Premises Dealt With Under the Slum Reclamation and Housing Acts.

Acting as agents for and under the direction of the Housing Commission, 198 premises were inspected in detail and reports thereon furnished to the Commission. In accordance with the arrangements made with the Housing Commission, attention was confined principally to houses in narrow streets and rights-of-way in the several districts of the City, although a number of houses in the main streets were also given attention.

The reports submitted were classified in accordance with the requirements of the Housing Act and 107 were included in List "A," requiring demolition of the premises, and 91 were placed in List "B," to be made to comply with the provisions of the Housing (Standard of Habitation) Regulations.

The following table shows the disposition of the houses reported and the number in each area:—

TABLE I.

	City	E. Melb.	S. Yarra	Carlton	N. Carlton	W. Melb.	N. Melb.	K'sington	Flem'ton	Total
Demolition	2	—	1	22	16	11	36	17	2	107
Repairs	—	1	2	20	16	25	16	8	3	91

### Notices Issued.

Acting under the instructions of the Housing Commission, notices affecting 231 properties were issued, together with copies of the Commission's declarations respecting such premises. This involved the preparation and service of 367 notices, 231 on owners and 136 on occupiers, and 15 on mortgagees. The nature of the notices issued, together with the areas affected, are set out hereunder:—

TABLE II.

	City	E. Melb.	S. Yarra	Carlton	N. Carlton	W. Melb.	N. Melb.	K'sington	Flem'ton	Total
Demolition	6	—	—	48	7	9	62	2	2	136
Repairs	—	1	2	17	20	22	25	5	3	95

### Compliance with Notices.

Resulting from notices issued, compliance has been effected in 136 instances; 112 premises have been demolished and 24 premises satisfactorily repaired, whilst 24 premises have been vacated awaiting demolition. With regard to the notices for repairs, work was in various stages of progress at a large number of premises at the close of the year. In this connection, considerable difficulty has been experienced owing to the scarcity of labour and the shortage of building materials, which has slowed up the progress of the work.

The following table shows the areas where compliance has been effected:—

TABLE III.

	City	E. Melb.	S. Yarra	Carlton	N. Carlton	W. Melb.	N. Melb.	K'sington	Flem'ton	Total
Demolition	2	—	—	64	6	9	31	—	—	112
Repairs	—	—	—	8	6	5	5	—	—	24
Vacated	4	—	—	3	4	4	7	2	—	24

Since the inception of the housing scheme in May, 1940, a total of 554 houses have been inspected in detail and reported to the Housing Commission.

The following tables set out the number of houses reported, the number of notices served, and the number of compliances in the several areas:—

TABLE "A."  
HOUSES REPORTED.

	City	E. Melb.	S. Yarra	Carlton	N. Carlton	W. Melb.	N. Melb.	K'sington	Flem'ton	Total
Demolition	11	—	1	147	23	11	182	17	2	394
Repairs	—	1	2	32	22	30	62	8	3	160

TABLE "B."  
NOTICES SERVED.

	City	E. Melb.	S. Yarra	Carlton	N. Carlton	W. Melb.	N. Melb.	K'sington	Flem'ton	Total
Demolitions	11	—	—	108	7	9	124	2	2	263
Repairs	—	1	2	22	22	26	31	5	3	112

TABLE "C."  
COMPLIANCE.

	City	E. Melb.	S. Yarra	Carlton	N. Carlton	W. Melb.	N. Melb.	K'sington	Flem'ton	Total
Demolition	6	—	—	82	6	9	66	—	—	169
Repairs	—	—	—	9	6	5	6	—	—	26

During the year the area in North Melbourne bounded by Molesworth Street, Curzon Street, Abbotsford Street and Haines Street was proclaimed as a Reclamation Area under Part 3 of the Housing Acts, notification of which was served on all owners concerned in this area by the Commission. A large number of appeals (about 50) were lodged by the owners of properties against the Commission's declarations relative to the conditions of the premises. This necessitated the creation of a special court, under the presidency of Mr. Mohr, P.M., which sat at the Fourth District Court, Melbourne, on Thursday, 17th April. At the conclusion of the hearing of the first appeal, which was dismissed with £5/5/- costs, a stay of proceedings was granted to enable counsel to consider the advisability of appealing to a higher court, in consequence of which all the other appeals were adjourned to a date to be fixed. This litigation is still proceeding notwithstanding that owing to the war situation the Housing Commission has decided to defer further action for the time being. Several appeals by individual owners in other areas against the Commission's declarations were heard, and all cases were dismissed with costs.

In connection with repairs and alterations to premises, co-operation is maintained with the Building Surveyor's Department, and where structural alterations are found necessary, the Building Surveyor is consulted and joint inspections are made.

Owing to the abnormal situation created by war conditions resulting in an acute shortage of housing, dearth of labour and scarcity of materials, the Commission decided to institute a modified policy with regard to demolitions and repairs. This policy provides that when notices have been served in the case of demolitions and the owner signs an agreement to effect urgent and immediate repairs, the order is deferred for the duration of the war. The premises listed for repairs are grouped into "A" and "B," and the owner, on application and on agreeing not to disturb the tenants, is permitted to carry out urgent or immediate repairs as specified in list "A" within 60 days, and the remainder of the work as classified in list "B" is then deferred for a period of 2 years. The apparent object is to preserve, as far as possible, the existing housing accommodation and to prevent the disturbance of tenants in occupancy, and at the same time relieve the owners to some extent of the difficulty in securing labour and material necessary to effect repairs. This scheme will, no doubt, relieve the situation to some degree notwithstanding that it considerably increases the departmental work in relation to housing, particularly with regard to the keeping of records.

Concerning the occupiers displaced as a result of the demolition of the houses in the several areas of the City, a return from the Housing Commission as at 31st December shows that accommodation was found for 43 families (consisting of 98 adults and 85 children) in the new houses being erected by the Commission in the outer suburbs. Since the commencement of the re-housing scheme in 1940, a total of 82 families (consisting of 173 adults and 154 children) have been re-housed.

#### **Boarding Houses.**

In furtherance of the campaign to improve boarding and lodging houses, 17 notices were served on both owners of the properties and the proprietors of the premises to effect repairs and renovations. At 195 premises improvements were effected during the year. Repairs and alterations were in progress at a number of other premises.

#### **FOOD INSPECTIONS.**

Close attention has been paid by the staff to the important work of inspections of all premises where food is manufactured, prepared, stored or exposed for sale. The regulations administered in this connection are the Cleanliness (Food), Eating House, Boarding House, and Seizure Regulations, and the premises covered include Food Factories, Hotels, Boarding Houses, Eating Houses, Grocers', Greengrocers', Butchers', Delicatessen, Smallgoods and Confectionery Shops. Improvements were effected at 89 premises during the year. Details of the number of such inspections and seizures are shown in the attached summary of routine work.

#### **FOOD SAMPLING.**

The regular and systematic collection of food samples for chemical and bacteriological examination was again carried out.

The total number of samples procured for chemical analysis during the year was 355, consisting of Butter, 10; Cream of Tartar, 1; Cheese, 8; Cream, 6; Jam, 4; Ice Cream, 6; Milk, 281; Mustard, 4; Pepper, 4; Sausage Meat, 16; Sauces, 8; Tinned Fish, 1; Vinegar, 6. There were 15 samples, or approximately 4.2 per cent. of the total, which failed to comply with the standard, comprising 8 milks, 1 sausage meat, 3 jams and 3 creams.

#### **Milk.**

The following is a summary of the chemical analysis of milk samples.

The total number of samples procured during the year was 281, involving 78 vendors, consisting of 57 Dairymen and 21 Milk Bars. Compared with 1940, there is an increase of two (2) in the number of samples, and a decrease of eleven (11) in the number of vendors.

The number of samples from all sources which complied with the standard was 273, or 97.2 per cent. of the total. Eight (8) samples, or 2.8 per cent, did not comply with the standard.

Of the samples below standard, 3 samples were deficient in Total Solids and Fatty Solids, 1 sample in Total Solids and Non-Fats, 1 sample in Non-Fats only, 2 samples in Fats only, whilst 1 sample was deficient in all constituent parts. Two (2) of these samples, in addition to other deficiencies, failed to comply with the Freezing Point Test. Altogether, 20 samples were submitted to the Freezing Point Test, 18 of which passed the test satisfactorily.

The number of samples taken from Milk Carts in course of delivery was 260. This number was made up of 172 samples from Bulk Supplies, and 88 from "bottled milk." Twenty-one (21) samples of "Drinking Milk" were procured at City Milk Bars, and two (2) Producers' samples were taken at the point of delivery.

With reference to the eight (8) samples which were found to be below standard, two (2) were from City Milk Bars and six (6) from delivery carts, consisting of three (3) samples from bulk supplies and three (3) samples from "Bottled Milk."

An analysis of the figures shows the average quality of milk per sample as follows:—

	Total Solids	Non-Fats	Fats
All Sources .....	13.27	9.03	4.24
Bulk Supplies .....	13.27	9.04	4.23
Bottled Samples .....	13.19	9.02	4.17
Milk Bars .....	13.37	9.04	4.33

The following comparative table shows the average quality of milk per sample since 1928; also the percentage of samples which did not comply with the standard:—

Year	No. of Samples	Total Solids	Non-Fats	Fats	Percentage of samples below standard
1928 .....	300	12.96	8.95	4.01	1.0%
1929 .....	633	12.88	8.89	3.99	3.8%
1930 .....	276	12.90	8.90	4.00	3.6%
1931 .....	289	12.97	9.00	3.97	2.7%
1932 .....	236	12.88	8.89	3.99	2.5%
1933 .....	282	12.95	8.96	3.99	2.4%
1934 .....	281	13.01	8.95	4.06	2.4%
1935 .....	271	13.01	8.90	4.11	5.0%
1936 .....	280	12.92	8.88	4.04	3.5%
1937 .....	265	13.11	8.90	4.21	2.6%
1938 .....	269	13.11	8.97	4.14	5.2%
1939 .....	275	13.38	9.18	4.20	1.09%
1940 .....	279	13.24	8.98	4.26	3.2%
1941 .....	281	13.27	9.03	4.24	2.8%

## BACTERIOLOGICAL EXAMINATION OF MILK SAMPLES.

In addition to the samples of milk submitted for chemical analysis there was also a total of 250 samples submitted to the Veterinary Research Institute, Parkville, for examination, consisting of 207 from "Bottled Milk" and 43 from bulk supplies, the bulk supplies being from a Metropolitan hospital. The number of samples examined shows a decrease of 28 when compared with that of the previous year, which is mainly accounted for by the fact that there is one less vendor supplying subsidised milk.

The samples were procured from the Companies supplying milk under the Council's subsidised scheme of milk distribution and from various carts in course of delivery within the City proper. The practice of obtaining regular weekly samples at a Metropolitan hospital was again followed, and, in addition, special samples of raw "bottled" milk were again procured at a City Milk Shop. Check samples were also taken from the ordinary delivery carts of the Companies supplying milk under the Council's scheme.

The result of the examinations discloses that 65 samples, or 24 per cent. of the total, showed unsatisfactory results, the counts being above a reasonable standard, and in fourteen (14) instances, or 5.6 per cent. of the total, the samples were found to be infected with streptococcic mastitis. The sources of the unsatisfactory counts were as follow:—

Sixteen (16) of 79 samples of milk supplied under the Council's scheme and forty-nine (49) of 161 samples taken from carts in course of delivery and other sources.

Of the total samples submitted, one hundred and ninety-seven (197), or 77.14 per cent., represented "Pasteurised" milk, all of which were subjected to the Phosphatase Test. The following table shows the result of such test:—

Source	No. of Samples	Negative	Percentage	Positive	Percentage
All Sources	197	145	74%	52	26%
Subsidised Milk	82	66	80%	16	20%
Metropolitan Hospital	43	41	95%	2	5%
Carts in course of delivery	72	38	53%	34	47%

The above results show an improvement on previous figures and indicate that the pasteurising process is being carried out more satisfactorily.

The attached Table "A" gives a comparative summary of the averages of the different milks, and it will be noted that, after adjustments by elimination of abnormal counts, the average of the microscopic and agar plate counts are higher than in previous years, probably accounted for by the lack of skilled workers which is being experienced throughout the dairying industry. In sixty-six (66) instances, or 26 per cent. of the total, the microscopic count was less than 20,000, as compared with 38 per cent. last year.

Table "B" gives a comparative summary of the averages for the periods 1939-1940, together with the figures for 1941.

## BACTERIOLOGICAL EXAMINATIONS OF MILK SAMPLES, 1941.

TABLE "A."

### COMPARATIVE SUMMARY OF AVERAGE COUNTS OF DIFFERENT MILKS.

(The Counts give the number of Germs per cubic centimetre of milk.)

Vendor	No. of Samples	Microscopic Count		Agar Plate Count		E. coli in 0.01 ml. Percentages	Remarks
		Average	% of Samples under 1 million	Average	% of Samples under 50,000		
All Sources	250	870,000 (omitting 24 abnormal samples)	78%	154,000 (omitting 36 abnormal samples)	49%	-64% +36%	65 letters 14 evidence s. mastitis
Vendor "A" Pasteurised	41	223,000	92%	56,000 (omitting 1 abnormal sample)	56%	-90% +10%	6 letters
Vendor "B" Pasteurised	38	306,000	92%	63,000 (omitting 1 abnormal sample)	60%	-71% +29%	10 letters 1 evidence s. mastitis
Vendor "C" Pasteurised Metropolitan Hospital	43	1,123,000 (omitting 5 abnormal samples)	81%	175,000 (omitting 4 abnormal samples)	70%	-93% +7%	9 letters 5 evidence s. mastitis
Milk Carts in course of delivery	128	1,159,000 (omitting 19 abnormal samples)	69%	206,000 (omitting 30 abnormal samples)	37%	-44% +56%	40 letters 8 evidence s. mastitis

# COMPARATIVE SUMMARY OF BACTERIOLOGICAL EXAMINATION OF MILK SAMPLES.

Periods 1939 and 1940 and for year 1941.

TABLE "B."

	1 Microscopic Count			2 Living Germs			3 Percentage of Samples showing absence of E. coli in 0.01 ml.				
	Percentage of Samples showing under 1,000,000 per c.c.		1939	Percentage of Samples showing under 50,000 per c.c.		1939	1940	1941	1939	1940	1941
	1940	1941		1940	1941						
A Milk bottled in City, pasteurised at country depot .....	81%	97%	92%	88%	88%	56%	73%	90%	90%	90%	
B Milk bottled in City, pasteurised at country depot .....	—	100%	92%	—	97%	60%	—	76%	71%	71%	
C Milk delivered in bulk, pasteurised on farm .....	92%	95%	81%	97%	86%	70%	100%	91%	93%	93%	
D Various milk carts .....	65%	76%	69%	60%	49%	37%	55%	54%	44%	44%	

Under present conditions a sample of milk may reasonably be expected to contain less than one million germs per cubic centimetre as shown by direct microscopic count (Column 1), less than 50,000 germs per cubic centimetre capable of growing at blood heat (Column 2), and absence of bacillus coli which is derived from filth, in one-hundredth part of a milli-litre (Column 3).

The Table shows what proportion of the samples attained this standard.

## SWIMMING BATHS.

Regular sampling of the water in the various pools throughout the City was carried out during the warm weather and submitted for bacteriological examinations. The results of these examinations, together with those of the regular tests for free chlorine in the water, indicated that the purification plants were being maintained in a satisfactory working condition.

## RAT DESTRUCTION.

Constant attention has been given throughout the year to the eradication of rats. This work is carried out by a staff of four men and a supervising foreman who operate mainly in the City proper, outer areas being visited periodically and as the occasion demands.

City shops and warehouses are regularly and systematically trapped by a special unit which is employed for this purpose. Preventive measures and rat proofing are carried out under the direction of the district health inspectors whenever found necessary. To ascertain the presence of sickness in the rat population and for experimental purposes, specimens were periodically submitted for bacteriological examination.

The extent of these operations will be evident from the following table:—

Complaints attended to	Notices under Rat Regulations	Premises Visited	No. of premises where structural work carried out	Total No. of rodents destroyed
516	74	1736	110	6836

The species of rats caught and destroyed during the year is shown in the following table, which gives a comparison with previous years and shows the differentiation between the sub-species of the black rats (prior to 1937 the totals for black and brown rats only were recorded):—

	M. Rattus	M. Alex.	M. Norveg.	Total
				Total
1935 .....	3073	3428	6501	
1936 .....	4275	4490	8765	
1937 .....	892	2409	4816	8117
1938 .....	957	2379	4708	8044
1939 .....	1090	2065	4252	7407
1940 .....	923	1620	3933	6576
1941 .....	924	1510	4172	6606

From the above classification it will be seen that M. Norveg, the ground or sewer rat, still predominates in the number of rats caught in the City.

## OFFENSIVE TRADES.

During the year 5 applications under Section 82 of the Health Act were considered and consent of Council was granted for the establishment of a hide and skin store in North Melbourne, and for alterations and additions to two wool scouring and fellmongering establishments and a hide and skin store in the Flemington and Kensington area. One application referred to an existing Marine Store at North Melbourne for which a transfer of the registration was un procurable.

Six registrations for poultry killing, cleaning and dressing were abolished during the year, four of which were situated in the Fish Market, and, in accordance with the policy of the Markets Committee, these premises ceased to operate. The others, one situated in the City and the other in Carlton, were discontinued, the premises being used for other purposes.

The Health Act 1941, passed by Parliament in December, clarifies the position in regard to fat-rendering in butchers' shops, and now provides that all butchers' premises where fat-rendering is carried out from materials derived from such shops shall be registered with the Council. A registration fee of £1 per annum has been fixed. This Act also excludes hide and skin stores forming part of a tannery, and dried rabbit and other dried furred skins from the Offensive Trade Schedule.

At the end of the year the number of Offensive Trades registered was 99, classified under the following headings:—

Bone Boiling and Milling, 2; Fat-Extracting or Melting, 12; Fellmongery, Wool-Scouring and Woolwashing, 13; Flock Shoddy or Mungo Manufacture, 2; Glue or Size Factories, 2; Gut Cleaning and Scraping, 2; Manure Works, 3; Marine Stores, 9; Poultry Killing, Cleaning and Dressing, 8; Rag Picking and Sorting, 1; Soap Works, 1; Stores for Skins, Hides, Hoofs, Hair or Bones, 45; Boiling Down Works, 1; Oil Boiling, 1; Abattoirs, 1; Refuse Destructor, 1; Tip, 1.

### REGISTRATIONS.

Registrations effected under the Health Act, together with details of new registrations, transfers, etc., are shown in the following table:—

Premises	No. Registered	No. not Renewed	Repairs or Renovns.	No. New Registrations	No. of Transfers	No. Altns.
Boarding Houses .. .. .. .. ..	642	19	195	53	72	
Eating Houses .. .. .. .. ..	471	36	88	18	76	
Ice Cream and Aerated Waters .. .. .. .. ..	266	15	10	15	34	
Common Lodging Houses .. .. .. .. ..	6	—	2	—	—	
Cattle Sale Yards .. .. .. .. ..	1	—	—	—	—	
Premises where Eggs are Chilled .. .. .. .. ..	4	—	—	—	—	
Offensive Trades .. .. .. .. ..	99	6	10	—	4	
Totals .. .. .. .. ..	1489	76	315	86	186	

Under the Council's By-Laws and Regulations, 28 Dancing Saloons and 7 Places of Pastime were also registered.

### HAIRDRESSING SALOONS.

Regular inspections of hairdressing establishments, both male and female, have been carried out throughout the year for the purpose of administering the Hairdressers' Shops Regulation 1922 made under the Health Acts.

The premises generally were found to be well kept and in compliance with the Regulations.

Owing to the restrictions placed on the use of formalin which was extensively used by hairdressers in the sterilisation of instruments, a modified policy was agreed upon between the Hairdressers' Board and the Department of Public Health relative to the use of sterilising cabinets, and this policy is now being given effect to by the department. Improvements were carried out at four premises during the period under review.

### STABLES.

The law relating to stables is somewhat vague and we have to rely to a very large extent upon the nuisance clauses of the Health Act for the control of these premises, but they are kept under regular supervision to ensure their general cleanliness. In an effort to combat the fly menace a special surveillance is exercised throughout the summer months, and whilst no statutory provision is made for the regular removal of manure, the practice is being observed of ensuring that the manure is removed at least once weekly.

A survey of all stables throughout the various areas of the City was undertaken during the year, details of which are shown in the following schedule:—

### SURVEY OF NUMBER OF STABLES, 1941.

District	No. of Stables	No. of Stalls	Vacant or Disused	No. of Horses
North Carlton .. .. .. .. ..	41	153	7	79
South Carlton .. .. .. .. ..	50	347	21	214
Kensington and Flemington—				
Racing .. .. .. .. ..	35	261	3	142
Ordinary .. .. .. .. ..	30	236	3	184
North Melbourne .. .. .. .. ..	53	555	3	294
West Melbourne .. .. .. .. ..	27	347	5	281
City and East Melbourne .. .. .. .. ..	3	10	—	9
City West .. .. .. .. ..	4	64	2	11
South Yarra .. .. .. .. ..	2	15	1	13
Totals .. .. .. .. ..	245	1988	45	1227

A comparison with a survey made in 1928, 13 years ago, shows a considerable decrease in the total number of stables and the horse population of the City. In 1928, there were 713 stables with 4108 stalls as compared with 245 stables and 1988 stalls at the present time. The actual horse population, as disclosed by the present survey, is 1227, and, although no figures are shown in this connection in the 1928 survey, it can, I think, be assumed that the decrease would be in ratio to that shown for the stallage accommodation. This decrease can, no doubt, be definitely attributed to the extended use of motor transport during this period.

However, with the prevailing petrol shortage and other restrictions, there is a likelihood of a return to horse-drawn transport, and the position will have to be carefully observed to prevent the establishment of unsatisfactory stabling with its attendant nuisances.

### SMOKE NUISANCE.

This problem has been somewhat aggravated owing to the restriction on the use of brown coal briquettes and the scarcity of firewood causing the proprietors to revert to the use of coal fuel. This has necessitated closer attention to the regular sweeping of a much larger number of chimneys than previously. During the year, 60 complaints were received and attended to involving 174 inspections and observations by members of the staff, resulting in alterations being effected at 16 premises. At 12 premises the furnaces were re-constructed, at three premises oil was substituted for coal fuel, and in one instance a special smoke-consuming apparatus was fixed. Minor improvements were also effected to the chimneys of a number of cafes and boarding houses.

### SANITARY SERVICES.

One hundred and thirty-nine temporary sanitary conveniences were installed at buildings in course of erection and at the military camps situated at Coode Island and the Olympic Park, involving approximately 7228 clearances. In addition to the ordinary routine installations, the marshalling grounds for Troops and Boy Scouts taking part in Patriotic Marches through the City were also serviced and 250 clearances effected. This work is carried out by contract under the supervision of the Senior Health Inspector. The night soil is transported by motor truck to the Melbourne and Metropolitan Board of Works Depot at Campbellfield, when it is disposed of by trenching on agricultural land.

### PUBLIC BUILDINGS.

The customary supervision of all registered dancing saloons and places of pastime under the Council's By-Laws and Regulations has been maintained. Owing to the abnormal situation, this work has become more exacting and a greater number of visits have had to be paid to prevent a possibility of overcrowding and to ensure the proper conduct of such places. In co-operation with the Public Health Department, theatres and other public buildings have been regularly inspected and the provisions of the regulations governing such places enforced. The unusual conditions existing at the present time also intensifies this work and demands a greater amount of surveillance than in former times.

### SUMMARY OF ROUTINE WORK CARRIED OUT DURING 1941.

No. of complaints received and attended to .....	1097
Fire reports received and attended to .....	178
Inspections under the Slum Reclamation and Housing Acts .....	639
Reports forwarded to the Housing Commission .....	198
Notices served under Slum Reclamation and Housing Acts .....	235
Specifications of work forwarded to owners under Slum Reclamation and Housing Acts .....	95
Inspections made under the Health Acts .....	279
Reinspections for work in progress .....	3664
No. of specifications forwarded to owners and proprietors under Health Act .....	125
Inspections of hotels and boarding houses .....	3138
Inspections of common lodging houses .....	21
Inspections of eating houses .....	5957
Inspections of ice cream and aerated water premises .....	1692
Inspections of factories (where food is manufactured) .....	1596
Inspections of other food premises .....	7688
Seizures of foodstuffs (consisting of desiccated cocoanut, mushrooms, popcorns, cereal biscuits, coffee beans and defective crockery) .....	11
Inspections of public buildings (day and evening) .....	614
Inspections of hairdressing saloons .....	812
Inspections of offensive trades and cattle sale yards .....	715
Inspections of streets and lanes .....	890
Inspections of vacant land .....	82
Inspections of yards .....	8528
Inspections of storage of refuse .....	12,663
Inspections of stables and manure bins .....	890
Interviews with property owners, architects, contractors, etc. ....	7153
Inspections by female staff of premises where females employed .....	115
Investigations of infectious diseases and instructions to householders (scarlet fever, 239; diphtheria, 420; other infectious diseases, 30) .....	689
Investigation of tuberculosis and domiciliary visits .....	2795
Visits to Health Centres (31) and Midwives (90) .....	121
Returns of infectious disease furnished to Public Health Department .....	547
Notifications of infectious disease forwarded to headmasters .....	248
Returns of registrations and transfers forwarded to Public Health Department .....	335
Number of notices received under Births Notification Acts .....	1303
Plans of new buildings and alterations examined .....	217
Notices served to secure the abatement of nuisances—	
(a) Defective sanitary conveniences .....	138
(b) Defective drainage .....	40

(c) Dirty premises and yards .....	31
(d) Accumulation of refuse and rubbish .....	50
(e) Dirty and defective stables .....	5
(f) Other Nuisances .....	204
	—
	468
Matters referred to other Departments—City Engineer, 33; Building Surveyor, 17; By-Laws, 4; Dog Inspector, 6 .....	60
Premises within the City registered by Factories Department—Factories, 2838; Shops, 3993	6831

### NEW LEGISLATION PASSED DURING 1941.

Amending Infectious Diseases Regulations 1941.

Proclamation of Governor-in-Council declaring a Reclamation Area in North Melbourne.

Amending Health Act 1941.

Amending Infectious Diseases Regulations 1941 (consolidating all other Infectious Diseases Regulations).

Amending By-Law No. 150.

### PROSECUTIONS.

Proceedings under the Health Act were undertaken in thirty-seven instances, eight (8) (affecting employees) were withdrawn, two (2) cases were withdrawn on payment of costs, two (2) milk cases were dismissed on a plea of reasonable precautions, one (1) case for carrying on an offensive trade (fat-rendering at butcher's premises) was dismissed with £2/2/- costs against the Council. On appeal, however, the decision of the Magistrate was set aside and the defendant convicted. In three instances, affecting samples of mixed jams which were below standard, warnings were issued to the vendors. In twenty-four (24) instances defendants were convicted and fined as follows:—

Nature of Offence.	No. of Cases	Fines	Costs
Selling adulterated Milk .....	4	£4 0 0	£18 7 0
Selling adulterated Sausages .....	1	1 0 0	2 11 0
Failing to label package of food containing preservative .....	1	1 0 0	1 11 6
Selling adulterated Cream .....	2	3 0 0	7 2 0
Failing to label package containing Cream .....	1	1 0 0	2 19 6
Carrying on Offensive Trade without consent of Council .....	1	1 1 0	2 2 0
Failing to protect Bread from dust .....	4	3 10 0	0 2 0
Failing to keep premises clean .....	2	13 0 0	4 14 6
Permitting food in contact with printed matter .....	1	1 0 0	1 11 6
Failing to protect food from flies .....	1	3 0 0	—
Failing to maintain premises against ingress of rats .....	1	3 0 0	—
Failing to provide proper garbage receptacles .....	1	2 0 0	2 10 6
Leaving waste food on roadway .....	1	1 0 0	1 1 0
Smoking where food was being prepared .....	3	6 0 0	—
Totals .....	24	£43 10 0	£44 12 6

### GENERAL.

It is with regret that I have to record that during the year we lost the services of a member of the inspectorial staff as a result of a fatal motor car accident during the Easter vacation. The late inspector, Mr. W. L. Wood, who was appointed to the staff in October, 1939, displayed enthusiasm and keenness in his duties and gave much promise of development. The condolences of the staff were conveyed to his father, Senior Inspector E. T. Wood.

As a result of the vacancy created by the death of Inspector Wood, Mr. R. L. Richards, of the Abattoirs staff, was appointed to the position of Health Inspector.

In conclusion, I wish to record my sincere appreciation of the loyal co-operation and assistance rendered by both the inspectorial and clerical staffs during a very difficult year.

THOS. G. O. JORDAN, M.R.S.I.,

Chief Health Inspector.

# Report of City Analysts

Melbourne Analytical Laboratory,  
27 William Street, Melbourne.

13th January, 1942.

The Chairman, Health Committee,  
City of Melbourne.

Sir,

We have the honour to report that during the year ended 31st December, 1941, we have received three hundred and fifty-five samples of Foods and Drugs. The following is a brief summary of the results obtained from analytical examinations:—

Milk—281 Samples .... .... .... .... ....

272 complied with the standard; 1 below in total solids, solids not fat and fatty solids, high in freezing point; 1 below in total solids and solids not fat, high in freezing point; 3 below in total solids and fatty solids; 1 below in solids not fat and high in freezing point; 2 below in fatty solids.

Butter—10 Samples .... .... .... .... ....

Complied with the standard.

Cream—6 Samples .... .... .... .... ....

4 complied with the standard; 1 contained 0.5 of a grain of hydrogen peroxide to the pound; 1 contained a trace of boric acid.

Cheese—8 Samples .... .... .... .... ....

Complied with the standard.

Vinegar—6 Samples .... .... .... .... ....

Complied with the standard.

Mustard—4 Samples .... .... .... .... ....

Complied with the standard.

Cream of Tartar—1 Sample .... .... .... ....

Complied with the standard.

Ice Cream—6 Samples .... .... .... .... ....

Complied with the standard in fat; no boric acid, lead or arsenic was detected.

Tomato Sauce—5 Samples .... .... .... ....

No adulteration detected.

Sauce—3 Samples .... .... .... .... ....

No adulteration detected.

White Pepper—4 Samples .... .... .... ....

3 complied with the standard; 1 contained a trace of foreign starch.

Mixed Jam—4 Samples .... .... .... .... ....

1 complied with the standard; 3 below in their amounts of soluble solids.

Lobster—1 Sample .... .... .... .... ....

Container was slightly corroded and sample discoloured due to iron. No other adulteration was detected.

Sausage Meat—16 Samples .... .... .... ....

2 no sulphur dioxide detected; 3 contained a trace of sulphur dioxide; 11 contained respectively 0.2, 0.5, 0.5, 1.1, 1.5, 2.1, 2.2, 2.9, 3.5, 3.5 and 7.4 grains of sulphur dioxide to the pound. No boric acid, saltpetre, nitrite or excess starch was detected in the above samples of sausage meat.

Yours obediently,

(Signed) DUNN, SON AND STONE,

(Analysts to the City of Melbourne.)

# Report of Bacteriological Examinations

The University of Melbourne,  
Bacteriology Department,  
Melbourne, N.3.  
18th February, 1942.

Annual Report on the Bacteriological Examinations undertaken on behalf of the Melbourne City Council by the Bacteriological Laboratory, Melbourne University, for the year 1941.

**Diphtheria**—A total of 1223 swabs were cultured and examined and 94 were found to be "positive." Two virulence tests were carried out and both proved to be "virulent" *B. diphtheriae*.

**Scarlet Fever**—216 blood plates were examined for the presence of Haemolytic streptococci and 81 were positive.

**Tuberculosis**—9 specimens of sputum were examined and 4 were positive.

**Typhoid Fever**—No specimens.

**Wassermann Test**—1 test was carried out.

**Water**—10 specimens of bath water were examined.

(Signed) HAROLD A. WOODRUFF, Director.









